# PE 31

Physical Activities Towards Health and Fitness 1

# MOVEMENT COMPETENCY TRAINING

CENTRAL MINDANAO UNIVERISTY
PHYSICAL EDUCATION DEPARTMENT

Physical Education Department

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UNIT 1

# BASIC CONCEPTS ON MOVEMENT COMPETENCY

## TIME ALLOTMENT

This learning guide will be discussed for two (2) hours, equivalent to 1 session

## INTRODUCTION

What is movement competency? How can one be competent in different movement patterns? This unit highlights the importance of movement competency for a better quality of life. It will begin by detailing the importance of having physical literacy- a knowledge provided by movement education. We then uncover the development of movement education. Afterwards it will uncover the factors that affect a person's adherence to physical activity. At the end of the unit, you will have a better understanding on the importance of developing movement competency for specific movement patterns as you relate it to your everyday physical activity.

## LEARNING OBJECTIVES

At the end of this unit the students should have shown:

1. Discussed the major concepts, skills and themes underpinning movement education;
2. showed in-depth appreciation on the importance of movement competency and physical literacy in everyday life; and
3. associated the fundamental movement patterns to everyday movements

## TOPICS

### WHAT IS THE IMPORTANCE OF PHYSICAL LITERACY?

From 2001 sedentary lifestyle and global obesity have been identified by developed countries as a crises that need to be addressed. Research have determined that physical literacy as one of the solutions to these crises. Physical literacy is the bank of fundamental movement and sports skills (this includes locomotion and object manipulation) an individual has accumulated throughout their lifetime. Studies have shown that fundamental movement skills are crucial in participating in physical activities.

People who are confident with their fundamental movement skills are more likely to participate in active recreational activities throughout their life. Proficient movers often have more self-esteem and self-confidence (Henderson, May, & Hummer, 1989). They are more willing to take risks, try new things, and are also more likely to maintain an active and healthy lifestyle.

Movement education is the vehicle in acquiring these fundamental of movement skills an individual need to perform physical activities. During the early years, students are first exposed the themes and concepts of movement skills until they eventually master it. As they progress in their schooling, students can then improve their skills by utilizing this prior learning and applying it into organized sporting contexts. Eventually as individuals become adults, they will choose their leisure activities.

# MOVEMENT EDUCATION

Movement education is all about laying the foundation of movement concepts, skills and themes to students for them to utilize during different contexts such as but not limited to, daily movement, organized sports, and working environment. To establish this foundation, the movement education approach uses a specific framework for classifying movement and encourage learners to build a movement vocabulary that they can apply to all subsequent movement context. However, before we delve into the movement framework, we'll take look at the people who pioneered the learner-initiated style of teaching Physical Education.

# HISTORY OF MOVEMENT EDUCATION

(THIS IS AN EXCERPT FROM TEACHING MOVEMENT EDUCATION BY KAREN ABELS & JENNIFER M. BRIDGES)

The early pioneers of movement education were influenced by the idea of the body being an expression of movement. Three of the most historically influential individuals were Francois Delsarte, Liselott Diem, and Rudolf von Laban.

**Francois Delsarte (French, 19th Century**)

One of the first people to articulate ideas of movement was Francois Delsarte, a Frenchman who lived in the 19th century. This era was influenced by Romanticism, which emphasized the notion of expression of thought and emotion. Delsarte developed what he termed applied aesthetics (Brown & Sommer, 1969) and focused his work in the arts, where he contributed critical ideas of connections among the mind, body, and spirit. He also saw movement as a union of time, space, and motion. Delsarte suggested that the combination of movements toward and away from the center of the body was critical to all other movements.

Delsarte believed that expressive movement should relate to the emotion that inspired that movement. In addition, he introduced the idea of parallelism in movement—the simultaneous motion of two body parts in the same direction and in succession. His nine laws of motion referred to altitude, force, motion, sequence, direction, form, velocity, reaction, and extension. These ideas gave rise to much of what was to come in the field of movement education.

**Liselott Diem (mid-late 1930s)**

In the mid- to late 1930s, Professor Liselott Diem and her husband, Carl, founded an internationally known college in Germany, Deutsche Sporthochschule Köln, to train teachers in sport and physical education. The college taught a "natural approach to teaching children to move effectively in all kinds of situations" (Brown and Sommer, 1969, p. 62 ). Children were encouraged to explore movement freely in their own way and according to their unique stages of development. The teacher's role was to provide an environment that supported and fostered this focus. The teacher would use simple equipment such as balls, wands, ropes, boxes, and benches to allow children to develop a wide variety of movement responses individually, with partners, or within small groups.

Diem's approach centered on learning to build movement skills and balance. Teachers were encouraged to challenge children by asking questions such as "Who can do this?" and "How can this be done differently?" They would then guide the children toward improving their quality of movement. Diem's focus for older children was more on developing an awareness and analysis of muscular force as well as how to move in time and space.

**Rudolf Laban (1879-1958)**

Rudolf von Laban (1879-1958) is considered by most as the true pioneer of movement education. A critical contribution was his theory of movement, focusing specifically on the concept of effort. Laban believed that the body was an

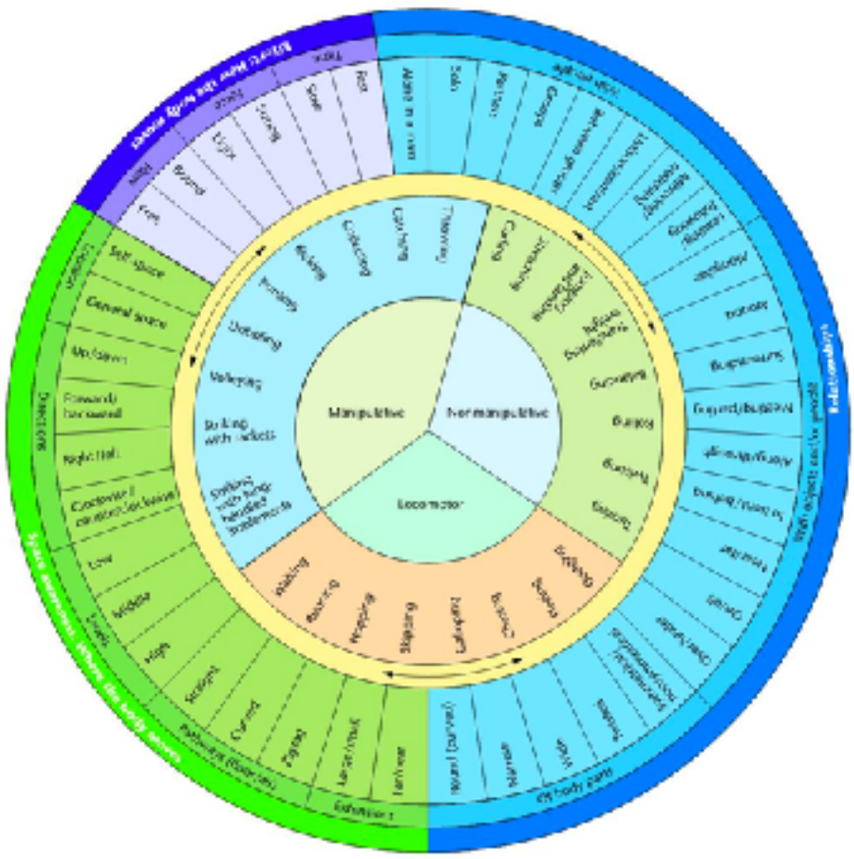
instrument of expression and made a distinction between this expressive movement and movements that serve a purpose in everyday life (functional movement). Expressive movement communicates ideas in dance or other forms of artistic expression. Functional movement has a purpose in addition to helping with the tasks of everyday life, such as sports and games. T5he four factors of movement that Laban identified (weight, space, time, and flow) became the bedrock of what became known as movement education.

Whereas Laban and his colleagues were concerned with the inner attitude of the mover and the function of each movement, those who came after them provided a way of regarding movement and applying this perspective to the teaching of physical education. The intent of those working at this time was to provide a framework that teachers could use to apply these movement concepts broadly in the following three learning domains: cognitive, psychomotor and affective. Stanley (1977) and Logsdon and colleagues (1984) identified the four major movement concepts as body, space, effort, and relationships. It is suggested that individuals develop enough knowledge about movement to to be skilled in executing all aspects of the movement content.

## MOVEMENT EDUCATION FRAMEWORK

Movement education is centered on themes and concepts. The goal is to expose people to movement concepts from their early years and then spiral their skill until they master the different combination of movement concepts.

The basic movements are composed of movement concepts and fundamental motor skills.




Source: https://joshstanishhemethods.files.wordpress.com/2013/11/movementwheel.jpg
Movement framework wheel is used to combine movement concepts and themes so that students can explore, analyze and apply the knowledge in different contexts and situations.

**Movement concept** is the knowledge and understanding of movement. It includes:

Effort is defined as the quality with which the movement is executed. It explores how the body moves. Its themes are: Time, Force, Flow.

Space Awareness explores where the body is moving in space. Its themes are: Location, Direction, Levels and Pathways

Relationships are the connections that occur as the body moves—with objects, people, and the environment. Its themes are: With or Without People

**Fundamental motor skills**- are of three categories. Locomotor, Non-locomotor, and manipulative.

Locomotor skills are movements that move the body from one place to another. This includes, walking, running, jumping, hopping, leaping, skipping, galloping, etc.

Nonlocomotor skills are executed on a fixed base of support such as bending and stretching, twisting and turning, pushing and pulling, and swinging and sway.

Manipulative skills are action skills that involve controlling an object. This includes throwing, catching, kicking and striking.

## FACTORS THAT ENHANCE OR LIMIT BODY MOVEMENT

The engagement in physical activities are also influenced by several factors. Even if an individual can execute fundamental motor skills proficiently, there are several factors that influence their engagement in physical activities. Below are the list of factors that can encourage us in doing physical activities or can discourage us from participating in physical leisure activities.

Physiological Factors: This type of factor is affected by our physical body, for example our body composition, health, physical fitness status.

Psychological Factors: This type of factor is affected by our idea of self-concept, fear, and/or anxiety.

Sociological Factors: This type of factor is affected by one's perception of self in a group context. For example: being a competitor, being with teammates, the relationship of the performer to the group, desire for social mobility.

Environmental Factors: This type of factor is affected by one's access to physical facilities, equipment, weather, and season.

**Group Task: Give a specific example for each factor**

| Factors | Enhances Body Movement | Limits Body Movement |
|---|---|---|
| **Physiological (example)** | Good levels of muscular endurance | Asthma |
| **Physiological** | | |
| **Pyschological** | | |
| **Sociological** | | |
| **Environmental** | | |

## MOVEMENT COMPETENCY

An individual's ability to perform a coordinated movement pattern, through a full range of motion in the absence of pain or discomfort, with correct posture, joint alignment and muscle coordination is called **movement competency.** For example, a person is said to have movement competency when they can lift the 5 gallon of water and install them in a dispenser without injuring themselves or being able to pick something from the with the correct posture and body mechanics.

A person is deemed to lack movement competency if they perform suboptimal movements. This implies that throughout the execution of the movement pattern a deviation to the ideal posture, joint alignment and muscle coordination happened. This performance of suboptimal movements indicate muscle imbalances and restrictions at a joint- a state that cause stress to one's muscles,

joints and soft tissues. Therefore, it is imperative that we understand how the ankle, knee, shoulder joints, lumbar and thoracic spine functional independently and synergistically as we perform different movement patterns.

Debates on which movement patterns to use as tools to screen movement deficits were had. According to the proposal of Giles (2011) in Tompsett, et al (2014), foundational movement patterns seems to be a logical tool for the assessment of movement competency. This is because foundational movement patterns such as squat, lunge, push, pull, hinge, brace and rotation are what underpins the requirements for everyday movement and fundamental sports skills.

## FUNDAMENTAL MOVEMENT PATTERNS*

*may also be called foundational movement patterns

**Movement Pattern #1: Squat**

A squat is a movement pattern where you plant both feet on the ground, then bend your legs to lower your body down while keeping your chest up and lower back straight.

A squat is a crucial movement for infants to master on their journey to independent locomotion. Squat is also essential for sitting on a chair and picking an object from the floor. The squat is trained to reinforce mobility of the ankles, knees, hips and back, important activities of daily living, sporting performance and recreational activities.

The squat is performed as follows:

1. Start in an upright position with knees and hops at or near full extension, feet approximately shoulder width apart.
2. Heels remain in contact with the floor and knees continue to align with the toes
3. Descend until thighs are at least parallel to the ground or lower.
4. Gaze remain forward or up while neutral spine is maintained until thighs are parallel to the ground. *natural kyphotic curve may be observed during deep squats
5. Weight are distributed on both legs to maintain balance and posterior-lateral hip alignment for promoting equal muscle strength between hips.

**Movement Pattern #2: Lunge**

A lunge is single leg exercise movement that requires one leg to step forward and bend while the other leg remains stationary. An example of a forward lunge is an exaggeration of the movement involved in the gait cycle. A lunge is essential in walking and climbing stairs.

The lunge is performed as follows:

1. Head, trunk and arms are controlled by the pelvis. This is observed through the maintenance oF horizontal hip alignment from the front.
2. Maintains balance over center of mass throughout the weight transfer without the supporting leg flexing
3. The fixed foot must maintain is position on the floor and not rotate in or out.
4. Front knee is in line with he small toes and over the ankle upon landing, shin remains vertical
5. A successful lunge requires a smooth transition back to the starting point.

**Movement Pattern #3: Push**

A pushing exercise requires pushing external weight away from your body, or your center of mass away from the ground, like in a push up. In daily living a push is required in activities such as closing the door, pushing a trolley or task fundamental sports skill, etc.

Push up is performed as follows:

1. Chest lowered until upper arms are positioned at least 90 degrees in relation to the ground.
2. Neutral spine, head inline with the trunk and vertebral column
3. Shoulders, spine and legs maintain a straight line
4. Hands placed directly under shoulders, weight even between hands.

**Movement Pattern #4: Pull**

A pulling motion is the opposite of a pushing motion, in that you are pulling a weight towards your body, or pulling your center of mass toward an object, like in a pull up. A pull can be seen in activities such as climbing, striking, during occupational and daily tasks.

**Movement Pattern #5: Twist/ Rotation**

Twist or Rotation is the foundation of various forms of locomotion, adapting the posture of the upper body, increasing the range of upper limbs and maintaining body balance during movement. Walking is the most common locomotion movement that relies heavily on adequate rotation between the upper limb and the lower limbs. Activities that require adequate rotation include rolling, sitting, standing, walking, turning, reaching behind the body, stretching and reversing a car. There are two primary types of twisting, or rotational movements: (1) rotational and (2) anti-rotational. Rotational movements are the basic twisting exercises, such as twisting to throw a ball. Anti-rotation are exercises where the rotational movement is prevented, like in a paloff press, or a single arm DB row.

**Movement Pattern #6: Bend/ Hinge**

Bending is a movement pattern where you bend your torso by hinging your hips. Hip hinge mechanics are commonly trained to strengthen the lower back, hips and hamstrings. It is beneficial for lower back rehabilitation and sporting pursuits such as cycling, equestrian and driving.

Bend or Hinge is performed as follows:

1. Hinge at the hips to maintain neutral spine with natural lordotic curve of the lumbar spine
2. Head remains in neutral alignment
3; Knees remain straight with no excessive bending throughout the movement, but not locked out during full extension
4. Weight is distributed evenly between the legs to maintain balance

**Group Task: Think about the movement similarities between foundation movements, sport and play skills, and activities of daily living. Fill out the table.**

| Foundation Movement | Sport and Play Skills | Activities of daily living |
|---|---|---|
| **Squat** | | |
| **Lunge** | | |
| **PushUp** | | |
| **Pull Up** | | |
| **Hinge** | | |
| **Rotation** | | |

## SUMMARY

Throughout this unit, we highlighted the importance of having physical literacy to the individual's capacity to perform tasks of daily living and to execute the fundamental motor skills necessary to play different recreational activities. We looked into movement education and what concepts, skills and movement themes it can impart an individual.

We also found out that besides impact of the presence or absence of fundamental motor skills to an individual's ability to perform varied physical activities, there are other factors that limit or enhance a person's adherence to physical activity. Finally, we emphasized on the foundational movement patterns that an individual must have movement competency on to have a good and pain-free execution of human movement.

## LEARNING ACTIVITIES /ASSESSMENT

Quiz.

## REFERENCES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3. Kayal, R. (2016). Movement Education: Syllabus on Health and Physical Education and Global Recommendation on Physical Activity for Health. Impact Factor (ISRA):5:38 IJPESH 2016; 3(6) 74-76.